Paradigm

A pattern of thinking that is frequently difficult to change.

A world view.
Objective

To learn three major programming models that complement the procedural and OO models:

• Functional paradigm

• Declarative/logic paradigm

• Concurrent paradigm
Programming language

- Functional paradigm — Scheme
- Declarative/logic paradigm — Prolog
- Concurrent paradigm — Java and C++
Motivation

A good background in different programming languages has given me the ability to think outside the box of one language style or another. Without this background, I would not be as valuable to my decidedly practically-minded company—even though we do not generally use theoretically interesting languages.

— John Prevost, ArsDigita Corporation
Computer Science and Programming
Demo Scheme

The read – eval – print loop.
Lambda expression

A lambda expression evaluates to a function.

\[
\text{(lambda (x) (* x x))}
\]

Function
Lambda expression

A lambda expression evaluates to a function.

\[ \text{(lambda (x) (* x x))} \]  

Parameter list
Quilt pattern class exercise